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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,155	08/17/2000	Spencer Wayne Bruce	99-056	4735

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EXAMINER

SMETANA, JIRI F

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 09/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/641,155

Applicant(s)

BRUCE ET AL.

Examiner

Jiri F. Smetana

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Rejection of claims 1-10 under 35 U.S.C. 112, second paragraph, is withdrawn pursuant to Applicant's amendment.
2. Claims 7, 9, and 10 stand rejected under 35 U.S.C. 102(b).
3. Claims 1-6 and 8 stand rejected under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 7, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Rueter, U.S. Patent No. 5,782,989.

The claimed invention reads on Rueter as follows: Rueter discloses a process for cleaning a reactor comprising of feeding a solution selected from an aqueous base (column 3, line 64 - column 4, line 11), an organic solvent of isopropanol (column 4, lines 12-27) and acetone (column 3, lines 48-50); emptying the reactor (column 6, lines 24-27); wherein, the reactor is a heat exchanger (column 6, lines 17-21).

The elements in the claims are read in the reference.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petermann et al., U.S. Patent No. 3,985,572.

Petermann discloses a process of feeding a solution of water through multiple pressure sources to a reactor having an agitator with blades and pressure sources aimed at the agitator blades (column 5, lines 18-25; column 9, lines 27-48); emptying the reactor (Figure 1); wherein the multiple pressure sources are hoses equipped with nozzles (column 5, lines 18-25); wherein the water is fed to the reactor at a pressure from 2,000 psi (138 bar) to 6,000 psi (414 bar) (column 5, lines 18-25); and wherein the reactor is equipped with a heat exchanger in an external loop (Figures 8A-8F; column 4, lines 52-60).

Petermann does not disclose wherein the pressure sources are stationary nor wherein the agitator is rotated while the solution is fed to the reactor. However, Petermann discloses wherein the agitator is stationary and the pressure sources are rotated while the solution is fed to the reactor (column 1, lines 27-43; column 9, lines 27-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to clean a reactor wherein the pressure sources are stationary and wherein the agitator is rotated while the solution is fed to the reactor in place of wherein the agitator is stationary and the pressure sources are rotated while the solution is fed to the reactor because one would have arrived at the same expected results. Further, the reversal of parts was held to have been obvious. *In re Gazda*, 104 USPQ 400 (CCPA 1955). The rearrangement of parts was also held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1950).

8. Claims 1, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petermann as applied to claims 1, 2, and 4 above, in view of the teaching reference of Komabashiri et al., EP 0248681 B1.

Recitation of Petermann is recited here from above.

Petermann does not explicitly disclose wherein the hoses are made of 316 stainless steel or wherein the cleaning agent is aqueous base or caustic. However, Komabashiri discloses wherein material used in a polymerization reactor, agitator, and baffle-plates is 316 stainless steel (page 4, lines 25-27) and wherein the cleaning agent is aqueous base or caustic (page 2, lines 37) at a temperature of 100°C or less (page 2, lines 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to clean a reactor with 316 stainless steel because Komabashiri teaches that such material is conventional in polymerization reactors, agitators, and baffle materials (page 4, lines 25-27). Further, the use of conventional material to perform their known functions in a conventional process is obvious. *In re Raner*, 134 USPQ 343 (CCPA 1962).

It would have been also been obvious to one of ordinary skill in the art at the time the invention was made to clean with a feeding solution of aqueous base or caustic at 100°C because Komabashiri teaches remarkable cleaning of a polymerization reactor (page 2, lines 28-31; page 4, lines 42-48).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petermann as applied to claims 1, 2, and 4 above, in view of Rodriguez et al., U.S. Patent No. 5,145,597.

Recitation of Petermann is recited here from above.

Petermann discloses wherein the feeding solution is a cleaning agent but does not explicitly disclose that it is an aqueous base or caustic. However, Rodriguez discloses wherein the cleaning agent is aqueous base or caustic (column 2, lines 11-26) at room temperature (column 1, line 62 - column 2, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Petermann in view of Rodriguez because Rodriguez teaches an improved method and solution is removing polymer residues from mechanical equipment in the production of such polymers (column 1, lines 10-15, 52-59).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rueter as applied to claims 7, 9, and 10 above, in view of Komabashiri et al., EP 0248681 B1.

Recitation of Rueter is repeated here from above.

Rueter does not disclose wherein the organic solvent comprises 15-30 weight percent aqueous base and from 40-60 weight percent organic solvent, based on the total weight of the solution, and the remainder water. However, Komabashiri discloses wherein the organic solvent comprises 0.01-30 weight percent aqueous base and from 0.01-50 weight percent organic solvent, based on the total weight of the solution, and the remainder water (page 2, lines 32-42).

Response to Arguments

11. Applicant's arguments filed 15 July 2002 have been fully considered but they are not persuasive.

Applicant argues that Reuter only discloses a cleaning solution containing a strong base which is soluble in the cleaning composition but does not disclose an aqueous base. However,

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Reuter clearly discloses that the base may be advantageously added in solid form or dissolved in water (column 5, lines 1-6). Therefore, this limitation in the claim is met.

Applicant argues that the cleaning nozzles in Petermann must follow programmable paths which must be controlled by a computer rather than by the reaction operator. However, Petermann teaches that the nozzles *may* be controlled by an electronic computer (column 1, line 33) and simply does not require computer control. Petermann also discloses that the container tank may be provided with internal obstructions by stating "If the container tank is provided with internal obstructions" (column 4, lines 52-53), therefore, internal obstructions are not a necessary requirement in Petermann. Although Petermann does not disclose wherein the pressure sources are stationary or wherein the agitator is rotated while the solution is fed to the reactor, Petermann does disclose wherein the agitator is stationary and the pressure sources are rotated while the solution is fed to the reactor (column 1, lines 27-43; column 9, lines 27-48). The transposition of process steps where the processes are substantially identical or equivalent in terms of function, manner and result, was held not to patentably distinguish the process. *Ex parte Rubin* 128 USPQ 440 (PTO BdPatApp 1959). As stated above, the reversal of parts and the rearrangement of parts was held to have been obvious and would have also arrived at the same expected results by making the pressure sources stationary and rotating the agitator blade while the solution is fed to the reactor. Unless Applicant can show unexpected results, such a modification would have been obvious.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching,

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suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Komabishiri clearly teaches that a mixture of organic solvent which comprises 0.01-30 weight percent aqueous base and from 0.01-50 weight percent organic solvent, based on the total weight of the solution, and the remainder water (page 2, lines 32-42) achieves satisfactory cleaning of the interior of a polymerization reactor, including the inside surface, agitator, and baffle-plates (page 2, lines 32-35). Therefore, one skilled in the art would have been motivated to combine Rueter in view of Komabashiri for reasons just previously recited.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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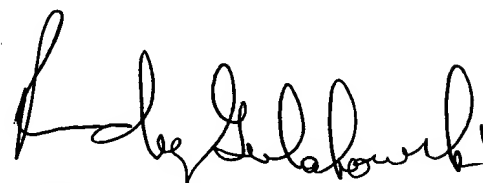
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiri F. Smetana whose telephone number is (703)605-1173. The examiner can normally be reached on Monday-Friday (7:30am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703)608-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Jiri F. Smetana
Patent Examiner
Art Unit 1746

jfs
August 28, 2002

A handwritten signature in black ink, appearing to read "Randy Gulakowski", is written over a printed name block.

RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700